Serial number	0258
Title	Personalising the student journey: exploring the impact of personalisation of learning on student behavioural engagement
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Personalising the student journey: exploring the impact of personalisation of learning on student behavioural engagement

UK Higher Education Institutions (HEIs) are increasingly using personalisation and engagement to improve the student experience. As limited studies exist on these two concepts, this paper aims to explore the impacts of personalisation on student behavioural engagement. It follows first year students before and after the implementation of a UK Business School's personalisation programme which is based on an academic mentor scheme and the use of learning analytics to track behavioural engagement levels.

Student engagement impacts on learning (Kahu, 2013; Lawson and Lawson, 2013), retention, attainment and satisfaction (Trowler and Trowler, 2010; Graham et al, 2007), and relates to interaction, participation and involvement (Trowler and Trowler, 2010; Kahu, 2013) in both the teaching and learning process, and quality assurance/enhancement (Botas et al, 2013). More recent student engagement frameworks acknowledge the importance of organisational conditions and ecologies (Lawson and Lawson, 2013; Kahu, 2013), with the key elements of peer support, organisational culture and faculty.

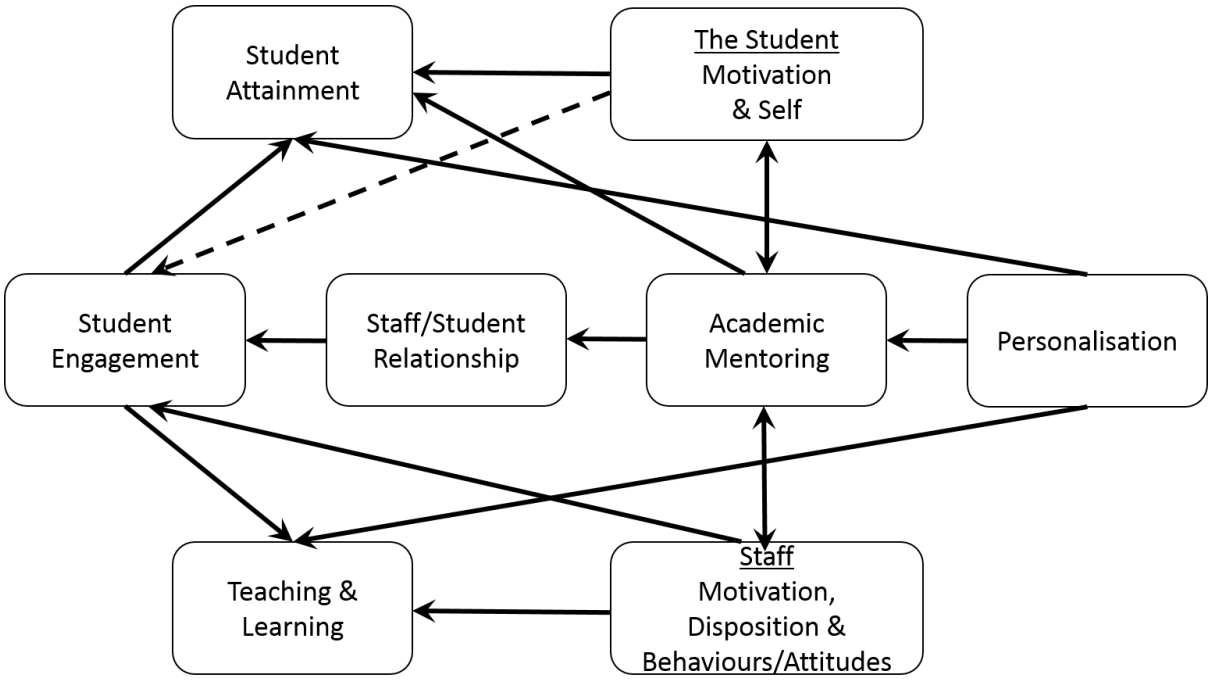
Literature on peer influences is limited and least relevant for this paper as personalisation initiatives are individually focussed. Organisational culture literature focuses on the oppositional view (Trowler and Trowler, 2010) rather than the collaborative and co-created (Lusch and Wu, 2012) approach hence, relevance is questionable given the collaborative nature of this personalisation programme. The critical role of faculty is recognised within the literature (Trowler and Trowler, 2010) and is of relevance with behaviours and attitudes having a 'dramatic effect' on student engagement (Umbach and Wawryznski, 2005,173). The teacher's emotional disposition is important in creating a sense of belonging in face-to-face interactions (Bryson and Hand, 2007) whilst the lack of teacher presence negatively impacts on student contributions (Finegold & Cooke, 2006).

Personalisation is a collaborative and student-centred approach increasingly being used to improve student engagement and can be defined as the multi-dimensional tailoring of every student's total educational experience with the student at the centre (Yazdani, 2016). Despite this definition, personalisation is not a term that is fully understood, with Becket and Brookes (2012,24) suggesting that academics see it as 'something that just happens…rather than a conscious thing' whilst students see one-to-one interaction and working more closely together as key. The benefits of personalisation include relationship building, greater student motivation, engagement, empowerment and achievement, the capacity to take account of individual learning styles, the organisational and operational benefits of countering the effects of large class sizes, maximising the use of new technology, and, the management of the transition period into HE (Ward and Richardson, 2007; Knox and Wyper, 2008). On the last of these, Christie et al (2016) argue that small differences in management and organisation of the students' learning practices

contributed to stronger self-identity. The importance of self is supported by Everett (2017) who suggests that self-belonging and personal fit are key factors in retention and achievement whilst Bartimote-Aufflick et al (2016) argue that self-efficacy is the most reliable predictor of student achievement.

Positive effects of mentoring on retention and attainment are unsubstantiated although evidence does support the pivotal nature of the student/academic mentor relationship (Jacobi, 1991). Student and staff motivation are important (Poulson, 2013) whilst Gerhardt (2016) suggests that millennials value sociability.

Figure 1 – Conceptual Framework



The relationship between academic mentoring and student engagement (Lawson & Lawson, 2013) is expanded using the staff/student relationship as an intermediate (Everett, 2017; Ward & Richardson, 2007; Knox & Wyper, 2008). Support for this is found in the relationship between staff, academic mentors, and engagement, based on staff behaviours and attitudes (Umbach and Wawryznski, 2005) and emotional disposition (Bryson and Hand, 2007). On the student side, one-to-one interaction and working closely together are important (Becket and Brookes, 2012), as are the teacher's presence (Finegold & Cooke, 2006) and sociability (Gerhardt, 2016). All these directly link to mentoring and the staff/student relationship. Furthermore, self-belonging and personal fit (Everett, 2017), motivation (Poulson, 2013) and self-efficacy (Bartimote-Aufflick et al, 2016) add to the importance of personal/relational factors. Further links to student attainment and the teaching and learning exist but fall outside this paper's scope.

Data were collected on student profile and the behavioural engagement score (calculated from metrics such as attendance, access to learning resources etc). Two quota samples

(course size) were taken, one prior (yr.0/n=398) and one post (yr.1/n=402) implementation.

Table 1 – Data Analysis Results

Variables[1]	Test Result[2]	Commentary
All students	Sig 5%	Mean engagement significantly higher in yr.1
Gender	Sig 5.5% (male) Not sig (female)	Mean engagement significantly higher for male students. No significant difference for female
Age	Not sig	No significant difference in engagement on age
Residency	Not sig	No significant difference in engagement on residency
Qualification	Sig 6.5% (other) Not sig (A-level)	Mean engagement significantly higher for non A-level qualifications. No significant difference for A-level
Entry points	Sig 0.5% (non-st) Sig 7.5% (lower) Not sig (mid/higher)	Mean engagement significantly higher for non-entry point awards/lower third of A-level points. No significant difference for mid/higher third A-level
Study mode	Sig 3.5% (FT) Not sig (SW)	Mean engagement significantly higher for full-time students. No significant difference for sandwich

1. Based on mean engagement scores, yr.0 vs yr.1
2. Difference between two means test, yr.0 vs yr.1

Our findings show that the personalisation programme significantly increased student engagement levels overall although certain student demographics benefited more. This included male students, fulltime students (as opposed to s/w placement year), and students with non-standard entry points and non A-level qualifications. These cohorts of students showed significant improvement in their engagement scores over the course of the academic year, though they exhibited lower engagement scores originally than other student groups. Students with typically high engagement scores at the start of the study, female, A-level entry, higher entry points, did show a small increase in overall engagement but this was not significant.

This paper adds to the limited literature on student engagement and the impact of personalisation of the student journey by drawing on data collected from a direct intervention personalisation programme at a UK Business School. Findings suggest that personalisation, through direct intervention and academic mentoring, has a positive impact on engagement. The findings are in line with present literature (Becket and Brookes, 2012; Lawson & Lawson, 2013; Umbach and Wawryznski, 2005). Most notable is the positive impact on certain cohorts of students who had shown lower engagement levels. Furthermore, personalisation did not improve engagement *further* on those students already highly engaged. Previous studies have shown that level of engagement has impacted on student retention and levels of attainment. As this is the case, we offer

analysis that a personalised approach to learning through the use of learning analytics and direct intervention will positively affect student attainment and achievement. This leads to potential for future research, particularly qualitative study, which explores *why* certain groups benefit more than others and the importance placed on personal/relational factors (Everett, 2017, Poulson, 2013, Bartimote-Aufflick et al, 2016).

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